NON-PUBLIC?: N
ACCESSION #: 8811150077
LICENSEE EVENT REPORT (LER)

FACILITY NAME: Zion Nuclear Power Station Unit 1 PAGE: 1 of 3

DOCKET NUMBER: 05000304

TITLE: Reactor Trip Due to Low Vacuum Turbine Trip During IM Surveillance
EVENT DATE: 10/12/88 LER #: 88-009-00 REPORT DATE: 11/11/88

OPERATING MODE: 11 POWER LEVEL: 0294

THIS REPORT IS SUBMITTED PURSUANT TO THE REQUIREMENTS OF 10 CFR SECTION
50.73(a)(2)(iv)

LICENSEE CONTACT FOR THIS LER:
NAME: Guy R. Levy, Regulatory Assurance TELEPHONE: 312-746-2084
Ext. 201
COMPONENT FAILURE DESCRIPTION:
CAUSE: SYSTEM: COMPONENT: MANUFACTURER:
REPORTABLE TO NPRDS:

SUPPLEMENTAL REPORT EXPECTED: No

ABSTRACT:

October 12, 1988 at 1336 hours the reactor tripped due to a turbine trip while an Instrument Maintenance (IM) Technician was attempting to calibrate the Control Room alarm switch for the Condenser Low Vacuum alarm accordance with procedure 2PS-TSS63LV.

The IM Technician disconnected the pneumatic sensing line to the alarm switch, which is connected to the vacuum Trip section of the Turbine Protection Block. This action caused the Trip Block to sense a Low Vacuum condition and subsequently trip the Main Turbine TA!. All systems functioned as designed to place the unit the Hot Shutdown mode automatically. The health and safety of the public were not compromised.

The root cause of the event has been determined to be the lack of an adequate procedure to perform the task. The procedure in question is being changed to provide the proper direction to perform the task without affecting the unit.

The Labelling Department will correctly label the alarm switch and isolation valve in the HP Turbine closure.

The IMs will continue the ongoing effort to upgrade the IM procedures.

END OF ABSTRACT

A. CONDITION PRIOR TO EVENT

MODE 1 - Power Operation RX Power 94

RCS AB) Temperature/ Pressure 555 degrees /2235 Psig

B. DESCRIPTION OF EVENT

On October 12, 1988 at 1336 hours the reactor tripped due to a turbine trip while an Instrument Maintenance (IM) Technician was attempting to calibrate the Control Room alarm switch for the condenser Low Vacuum Alarm in accordance with procedure 2PS-TSS63LV.

The Shift Control Room Engineer (SCRE) reviewed and authorized the work request, noting that the IM was working from an approved procedure. The SCRE also noted that the instrument to be calibrated was for alarm only, as stated on the procedure.

Prior to beginning the work, the IM requested assistance in identifying the correct instrument. An IM Foreman verified that the alarm switch was the one in question. The IM Technician disconnected the pneumatic sensing line to the alarm switch, which is connected to the Vacuum Trip section of the Turbine Protection Block (also called the Turbine Trip Block) of the Turbine Electro-Hydraulic Control System (EHC) TG!. This action caused the Trip Block to sense a Low Vacuum condition and subsequently trip the Main Turbine TA!. The Reactor Protection System (RPS) JC! then tripped the reactor as required. All systems functioned as designed to place the unit in the Hot Shutdown mode automatically. This event is being reported as required by 10CFR50.73(a)(2)(iv).

C. APPARENT CAUSE OF EVENT

The root cause of the event has been determined to be the lack of an adequate procedure to perform the task. The procedure did not direct the IM Technician to isolate the alarm switch from the Trip Block before commencing work. However, the procedure did have a caution to slowly valve in the instrument. Compounding this is the fact that the isolation valve is hidden from view below the Trip Block at knee level and is not labelled, while the alarm switch in question is situated at eye level (all items in question are in the High Pressure Turbine enclosure). Due to the layout of the equipment related to this

event, it is not obvious that any physical connection exists between the alarm switch and the Trip Block.

The procedure also lends a false sense of security in that there is a note stating that the switch is for alarm only, which is true; however, it did not provide the IM Technician with the necessary precaution to alert him of potential interaction with other systems.

D. SAFETY ANALYSIS OF EVENT

The turbine trip was caused by an inadvertant low vacuum actuation of the Turbine Trip Block when, in fact, no low vacuum actually existed at the exhaust of the turbine. All protective devices and control equipment functioned as designed to place the unit in a Hot Shutdown condition. The health and safety of the public were not compromised.

E. CORRECTIVE ACTIONS

A procedure change request was already in progress to completely rewrite the entire procedure and add the appropriate steps to close the isolation valve before disconnecting the pneumatic sensing line from the alarm switch. The IM Foreman and the Technician were not aware of the pending change.

The labelling department will correctly label the alarm switch and isolation valve in the HP Turbine enclosure.

The IMs will continue the ongoing effort to upgrade the IM procedures. IM Technicians currently provide feedback to the Master IM to identify all instruments requiring cautionary steps in their respective procedures.

F. PREVIOUS
VENTS

One previous event occurred as documented in LER 86-019. An IM Technician failed to valve in a pressure transmitter following maintenance in the EHC System, causing a Turbine trip during a startup, after going on-line. The corrective actions from that event included actions to identify all instruments having potential impact on plant operations. The procedure causing this event was identified as a result of the LER 88-019 corrective actions and was in the process of being changed. As described above, this effort is ongoing.

G. COMPONENT FAILURE DATA

None

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Zion Generating Station
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Zion, Illinois 60099
Telephone 312/746-2084

U.S. Nuclear Regulatory Commission
Document Control Desk
Washington, D.C. 20555

Dear Sir:

The enclosed Licensee Event Report number 88-009-00, Docket No. 50-204/DPR-48 from Zion Generating Station is being transmitted to you in accordance with the requirements of 10CFR50.73(a)(2)(iv), which requires a 30 day written report when any event or condition results in manual or automatic actuation of any Engineered Safety Feature, including the Reactor Protection System.

Very truly yours,

G. J. Pliml
Station Manager
Zion Generating Station

GJP/ts

Enclosure: Licensee Event Report

cc: NRC Region III Administrator
NRC Resident Inspector
INPO Record Center
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